

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A device comprising:
a resonator formed of a piezoelectric layer sandwiched between two metal electrodes, the resonator being laid on a suspended beam, and
means for deforming said beam by a difference in thermal expansion coefficients.
2. (Original) The device of claim 1, wherein the means for deforming the beam comprise heating elements and one or several blocks in contact with the beam, the blocks being formed of a material having a thermal expansion coefficient different from that of the beam.
3. (Original) The device of claim 2, wherein the heating elements are placed within the beam.
4. (Original) The device of claim 1, wherein electrodes are placed in the beam opposite to other electrodes external to the beam, the electrodes being connected to a voltage source capable of biasing the electrodes to maintain the beam deformation.
5. (Original) The device of claim 4, wherein the beam is placed above a cavity formed in a substrate, the external electrodes being placed in the cavity.
6. (Original) An integrated circuit comprising the device of claim 1.

7. (Currently Amended) A device, comprising:
a deformable bridge composed of a first material;
a resonator positioned on said bridge, said resonator having a piezoelectric layer and first and second electrodes coupled to the piezoelectric layer;
a ~~thermal~~thermally responsive material ~~positioned on~~mechanically coupled to said bridge, the ~~thermal~~thermally responsive material having a thermal expansion coefficient that is different from the bridge's thermal expansion coefficient; and
a heating element positioned adjacent to the ~~thermal~~thermally responsive material, wherein the thermally responsive material is structured to expand in a manner that deforms the bridge when the thermally responsive material is heated by the heating element.

8. (Currently Amended) The device according to claim 7 wherein the ~~thermal~~thermally responsive material is a metal.

9. (Currently Amended) The device according to claim 7 wherein the ~~thermal~~thermally responsive material is an aluminum-based material.

10. (Original) The device according to claim 7, further including:
a cavity positioned under the bridge.

11. (Original) The device according to claim 7 wherein the bridge is composed of silicon nitride.

12. (Currently Amended) The device according to claim 7 wherein the ~~thermal~~thermally responsive material is positioned on an upper surface of said bridge and has a larger thermal coefficient of expansion than said bridge, thereby causing a central region of the bridge to bend downward when the device is heated.

13. (New) The device of claim 7, wherein the heating element is placed within the bridge.

14. (New) The device of claim 7, further comprising:
a third electrode positioned in the bridge;
a fourth electrode position external to the bridge and opposite to the third electrode; and
a voltage source connected to the third and fourth electrodes and structured to apply a voltage between the third and fourth electrodes in a manner that maintains the bridge in a deformed state by electrostatic attraction between the third and fourth electrodes.

15. (New) The device of claim 14, wherein the bridge is placed above a cavity formed in a substrate, the fourth electrode being placed in the cavity.

16. (New) A device, comprising:
a piezoelectric resonator having a piezoelectric layer positioned between first and second electrodes;
a deformable suspension beam suspended across a cavity, the resonator being supported by the suspension beam and positioned above the cavity;
an expandable element mechanically coupled to said bridge, the expandable element having a thermal expansion coefficient that is different from a thermal expansion coefficient of the suspension beam; and
a heating element positioned adjacent to the expandable element, wherein the expandable element is structured to expand in a manner that deforms the suspension beam when the expandable element is heated by the heating element.

17. (New) The device of claim 16 wherein the expandable element is positioned on an upper surface of the suspension beam and has a larger thermal coefficient of

expansion than said bridge, thereby causing a central region of the bridge to bend downward when the expandable element is heated.

18. (New) The device of claim 16, wherein the heating element is placed within the suspension beam.

19. (New) The device of claim 16, further comprising:
a third electrode positioned in the suspension beam;
a fourth electrode position external to the suspension beam and opposite to the third electrode; and
a voltage source connected to the third and fourth electrodes and structured to apply a voltage between the third and fourth electrodes in a manner that maintains the suspension beam in a deformed state by electrostatic attraction between the third and fourth electrodes.

20. (New) The device of claim 19, wherein the fourth electrode being placed in the cavity.